Amendments to the claims

1-20. (Canceled)

21. (Currently Amended) Treatment apparatus, comprising:

an electrode device, configured ~~adapted~~ to be coupled to tissue of a subject suffering from atrial fibrillation (AF); and

a control unit, configured ~~adapted~~ to:

drive the electrode device to apply an electrical current to the tissue during an occurrence of the AF, and

configure the current to increase ~~modify~~ atrial motion of the subject, without terminating the occurrence of the AF, to a level sufficient to reduce a risk of an occurrence of a thromboembolic event.

22. (Currently Amended) Apparatus according to claim 21, wherein the control unit is configured ~~adapted~~ to configure the current to modify blood flow within an atrium of the subject.

23. (Currently Amended) Apparatus according to claim 21, wherein the electrode device is configured ~~adapted~~ to be coupled to the tissue of the subject, the subject suffering from the AF and ~~atrial fibrillation (AF) or~~ from increased risk of thromboembolic events.

24. (Currently Amended) Apparatus according to claim 21, wherein the control unit is configured ~~adapted~~ to configure the current to increase blood flow out of a left atrial auricle of the subject.

25. (Currently Amended) Apparatus according to claim 21, further comprising a sensor configured ~~adapted~~ to detect the [[an]] occurrence of the AF ~~atrial fibrillation (AF)~~ and generate a sensor signal responsive thereto, wherein the control unit is configured ~~adapted~~ to receive the sensor signal, and to drive the electrode device to apply the current responsively to the sensor signal ~~during the occurrence of the AF~~.

26. (Canceled)

27. (Currently Amended) Apparatus according to claim 21, wherein the tissue includes cardiac tissue of the subject, and wherein the electrode device is configured ~~adapted~~ to be coupled to the cardiac tissue.

28. (Currently Amended) Apparatus according to claim 21, wherein the tissue is selected from the group ~~list~~ consisting of: atrial tissue, cardiac fat pad tissue, a pulmonary vein, a carotid artery, a carotid sinus, a vena cava vein, and an internal jugular vein, and wherein the electrode device is configured ~~adapted~~ to be coupled to the selected tissue.

29. (Currently Amended) Apparatus according to claim 21, wherein the tissue includes a vagus nerve of the subject, and wherein the electrode device is configured ~~adapted~~ to be coupled to the vagus nerve.

30. (Currently Amended) Apparatus according to claim 29,

wherein the control unit is configured ~~adapted~~ to configure the current to include a stimulating current, which is capable of inducing action potentials in a first set and a second set of nerve fibers of the vagus nerve, and an inhibiting current, which is capable of inhibiting the induced action potentials traveling in the second set of nerve fibers, the nerve fibers in the second set having generally larger diameters than the nerve fibers in the first set, and

wherein the control unit is configured ~~adapted~~ to drive the electrode device to apply the stimulating current and the inhibiting current to the vagus nerve.

31. (Currently Amended) Apparatus according to claim 29,

wherein the control unit is configured ~~adapted~~ to configure the current to include a stimulating current, which is capable of inducing action potentials in the vagus nerve, and an inhibiting current, which is capable of inhibiting device-induced action

potentials traveling in the vagus nerve in an afferent direction toward a brain of the subject, and

wherein the control unit is configured ~~adapted~~ to drive the electrode device to apply the stimulating current and the inhibiting current to the vagus nerve.

32. (Currently Amended) Apparatus according to claim 29, wherein the control unit is configured ~~adapted~~ to:

during a first stimulation period, configure the current to cause a reduction in a force of contraction of atrial cells of the subject, and

during a second stimulation period, configure the current to cause an increase in the reduced force of contraction of the atrial cells.

33. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to set the first stimulation period to have a duration of between about 100 milliseconds and about 1000 milliseconds.

34. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to set the second stimulation period to have a duration of between about 200 milliseconds and about 15 seconds.

35. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to configure the current to have a first frequency during the first stimulation period, and a second frequency during the second stimulation period, the first frequency greater than the second frequency.

36. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to configure the current to have a first amplitude during the first stimulation period, and a second amplitude during the second stimulation period, the first amplitude greater than the second amplitude.

37. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to:

drive the electrode device to apply the current during the first stimulation period, and

withhold the electrode device from applying the current during the second stimulation period.

38. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to:

during the first stimulation period, configure the current so as to induce action potentials in the vagus nerve, and

during the second stimulation period, configure the current so as to block action potentials in the vagus nerve.

39. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to configure the current so as to induce action potentials in the vagus nerve during the first and the second stimulation periods.

40. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to:

drive the electrode device to apply the current in respective bursts in each of a plurality of cardiac cycles of the subject, and

configure each pulse of each of the bursts to have a pulse width of at least a first pulse width during the first stimulation period, and to have a pulse width of less than a second pulse width during the second stimulation period, the first pulse width being greater than or equal to the second pulse width.

41. (Currently Amended) Apparatus according to claim 32, wherein the control unit is configured ~~adapted~~ to:

drive the electrode device to apply the current in respective bursts in each of a plurality of cardiac cycles of the subject, and

configure each of the bursts to have a number of pulses of at least a first number of pulses during the first stimulation period, and to have a number of pulses of less than a second

number of pulses during the second stimulation period, the first number of pulses being greater than or equal to the second number of pulses.

42. (Currently Amended) Apparatus according to claim 32, further comprising a sensor, configured ~~adapted~~ to sense at least one physiological variable of the subject, and to generate a sensor signal responsive thereto, and wherein the control unit is configured ~~adapted~~ to receive the sensor signal and to synchronize therewith a commencement of at least one of the first and second stimulation periods.

43. (Currently Amended) Apparatus according to claim 42, wherein the sensed physiological variable includes a QRS-complex of the subject, and wherein the control unit is configured ~~adapted~~ to initiate the first stimulation period within about 50 milliseconds after an occurrence of the QRS-complex.

44. (Currently Amended) Apparatus according to claim 42, wherein the sensed physiological variable includes an expiration by the subject, and wherein the control unit is configured ~~adapted~~ to initiate the first stimulation period within about 500 milliseconds after a beginning of the expiration.

45. (Currently Amended) Apparatus according to claim 42, wherein the sensed physiological variable includes diastole of the subject, and wherein the control unit is configured ~~adapted~~ to initiate the second stimulation period substantially simultaneously with a portion of the diastole.

46-163. (Canceled)

164. (Currently Amended) A treatment method, comprising:

identifying that a subject suffers from atrial fibrillation (AF);

responsively to the identifying, applying an electrical current to tissue of the [[a]] subject during an occurrence of the AF; and

configuring the current to increase ~~modify~~ atrial motion of the subject, without terminating the occurrence of the AF, to a level sufficient to reduce a risk of an occurrence of a thromboembolic event.

165. (Original) A method according to claim 164, wherein configuring the current comprises configuring the current to modify blood flow within an atrium of the subject.

166. (Currently Amended) A method according to claim 164, ~~comprising~~ wherein identifying comprises identifying that the subject is suffering from the AF and ~~atrial fibrillation (AF) or~~ from increased risk of thromboembolic events.

167. (Original) A method according to claim 164, wherein configuring the current comprises configuring the current to increase blood flow out of a left atrial auricle of the subject.

168. (Currently Amended) A method according to claim 164, wherein applying the current comprises detecting the occurrence of the AF, and applying the current responsively to the detecting ~~applying the current during an occurrence of atrial fibrillation~~.

169. (Canceled)

170. (Previously Presented) A method according to claim 164, wherein the tissue includes cardiac tissue of the subject, and wherein applying the current comprises applying the current to the cardiac tissue.

171. (Previously Presented) A method according to claim 164, wherein the tissue is selected from the list consisting of: atrial tissue, cardiac fat pad tissue, a pulmonary vein, a carotid artery, a carotid sinus, a vena cava vein, and an internal jugular vein, and wherein applying the current comprises applying the current to the selected tissue.

172. (Previously Presented) A method according to claim 164, wherein the tissue includes a vagus nerve of the subject, and

wherein applying the current comprises applying the current to the vagus nerve.

173. (Original) A method according to claim 172,

wherein applying the current comprises applying a stimulating current and an inhibiting current, and

wherein configuring the current comprises configuring the stimulating current to induce action potentials in a first set and a second set of nerve fibers of the vagus nerve, and configuring the inhibiting current to inhibit the induced action potentials traveling in the second set of nerve fibers, the nerve fibers in the second set having generally larger diameters than the nerve fibers in the first set.

174. (Original) A method according to claim 172,

wherein applying the current comprises applying a stimulating current and an inhibiting current, and

wherein configuring the current comprises configuring the stimulating current to induce action potentials in the vagus nerve, and configuring the inhibiting current to inhibit action potentials induced by the stimulating current and traveling in the vagus nerve in an afferent direction toward a brain of the subject.

175. (Original) A method according to claim 172, wherein configuring the current comprises:

during a first stimulation period, configuring the current to cause a reduction in a force of contraction of atrial cells of the subject; and

during a second stimulation period, configuring the current to cause an increase in the reduced force of contraction of the atrial cells.

176. (Original) A method according to claim 175, wherein configuring the current comprises setting the first stimulation period to have a duration of between about 100 milliseconds and about 1000 milliseconds.

177. (Original) A method according to claim 175, wherein configuring the current comprises setting the second stimulation period to have a duration of between about 200 milliseconds and about 15 seconds.

178. (Original) A method according to claim 175, wherein configuring the current comprises configuring the current to have a first frequency during the first stimulation period, and a second frequency during the second stimulation period, the first frequency greater than the second frequency.

179. (Original) A method according to claim 175, wherein configuring the current comprises configuring the current to have a first amplitude during the first stimulation period, and a second amplitude during the second stimulation period, the first amplitude greater than the second amplitude.

180. (Original) A method according to claim 175, wherein applying the current comprises:

applying the current during the first stimulation period; and

withholding applying the current during the second stimulation period.

181. (Original) A method according to claim 175, wherein configuring the current comprises:

during the first stimulation period, configuring the current so as to induce action potentials in the vagus nerve; and

during the second stimulation period, configuring the current so as to block action potentials in the vagus nerve.

182. (Original) A method according to claim 175, wherein configuring the current comprises configuring the current so as to induce action potentials in the vagus nerve during the first and the second stimulation periods.

183. (Original) A method according to claim 175,

wherein applying the current comprises applying the current in respective bursts in each of a plurality of cardiac cycles of the subject, and

wherein configuring the current comprises configuring each pulse of each of the bursts to have a pulse width of at least a first pulse width during the first stimulation period, and to have a pulse width of less than a second pulse width during the second stimulation period, the first pulse width being greater than or equal to the second pulse width.

184. (Original) A method according to claim 175,

wherein applying the current comprises applying the current in respective bursts in each of a plurality of cardiac cycles of the subject, and

wherein configuring the current comprises configuring each of the bursts to have a number of pulses of at least a first number of pulses during the first stimulation period, and to have a number of pulses of less than a second number of pulses during the second stimulation period, the first number of pulses being greater than or equal to the second number of pulses.

185. (Currently Amended) A method according to claim 175, ~~comprising~~ wherein configuring the current comprises sensing at least one physiological variable of the subject, ~~wherein configuring the current comprises~~ and synchronizing a commencement of at least one of the first and second stimulation periods with the sensed physiological variable.

186. (Original) A method according to claim 185, wherein the sensed physiological variable includes a QRS-complex of the subject, and wherein configuring the current comprises initiating the first stimulation period within about 50 milliseconds after an occurrence of the QRS-complex.

187. (Original) A method according to claim 185, wherein the sensed physiological variable includes an expiration by the subject, and wherein configuring the current comprises initiating

the first stimulation period within about 500 milliseconds after a beginning of the expiration.

188. (Original) A method according to claim 185, wherein the sensed physiological variable includes diastole of the subject, and wherein configuring the current comprises initiating the second stimulation period substantially simultaneously with a portion of the diastole.

189-360. (Canceled)